



Editorial

Practicing allergy-immunology in the 21st century: Socioeconomic challenges



All of us who are currently privileged to practice allergy-immunology in western medicine are often struck with the spectrum of technology available to us for diagnosis and management of diseases in the patients for whom we care. Our methods have become increasingly technically sophisticated as more sensitive testing and the introduction of newer and, in many cases, more effective therapies has become ever-increasingly available. As we all know, however, just because things are newer does not automatically make them better or even necessary to provide the optimal care we all seek to offer.

It is with these thoughts in mind that the editors commissioned multiple features in this month's issue of the *Annals of Allergy, Asthma and Immunology* that consider the socioeconomic impact of various diagnostic and therapeutic modalities in our modern allergy-immunology practices and how this has impacted, does impact, and will impact our practices as funding sources and practices continue to change. We selected 3 of the most common conditions seen in practicing allergy/immunology (AI) specialists' offices—difficult-to-treat asthma, atopic dermatitis, and food allergy—to consider in this socioeconomic centered issue of the *Annals*.

One of the biggest adaptations made in our practices over the last decade and a half has been how best to deal with the introduction of monoclonal antibody biologics for the treatment of difficult-to-control asthma. A perspective article by Rank and Oppenheimer¹ ponders when and how biologics can best be used in which asthma patients and how we can guard against over- or under-using them. With the introduction of omalizumab in 2003, we were faced with what was initially a single therapeutic option that was usually up to an order of magnitude more expensive than previously available therapeutic choices. Over the following decade, a myriad of papers were published and presentations made making the argument that the use of biologics was cost effective in more severe asthma when the *overall* cost of care was considered. This concept has undergone careful scrutiny as the number of choices (and prices) of biologics has increased substantially in the last several years.

Naturally, as time has progressed, the use of biologics has expanded to what some might consider less severe disease in patients less likely to be hospitalized or need urgent care (2 expensive therapeutic options). This potential conundrum is expertly reviewed by Anderson and Szefer,² who explore the cost effectiveness of using biologics in moderate to severe asthma. These authors review data that suggest that currently available biologics are not always cost effective, particularly in less severe disease as management styles by both patients and providers has made urgent care visits and

hospitalizations less frequent than in previous years. Additionally, all currently available biologics apparently target essentially the same clinical asthma phenotypes, which begs the question of why there is little evidence for any significant pricing advantages among these products. The end result is the need for all of us as providers to be thoughtful and careful of what we prescribe and why, taking into account the economic impacts of our choices and recommendations.

Another disease that has experienced increased new therapeutic choices is atopic dermatitis (AD). In his perspective, Blaiss³ indicates that we again have a series of decisions to make about treating a relatively common disease from which no one dies directly but that can dramatically compromise the quality of life for the afflicted patient and associated family and friends. Historically, AD was considered mostly a pediatric disease, but more recent data show a substantial prevalence in adult populations as well. Additionally, it is not uncommon for AD to be part of an “allergic march” or food allergy picture in both children and adults. The reported morbidity in AD patients is substantial, from allergic comorbidities to increased infectious disease risk to compromised quality of life to possible adverse impact on intellectual capabilities or performance in children and adults. All of these have significant costs and negative economic impacts. It is therefore little wonder that more effective therapies have been sought to better control this illness. There are already new therapies and more on the way that have the potential to raise the cost of care for AD patients. The major question we will face is whether these new therapies will be cost effective and how accurately that can be measured.

This question is very adroitly addressed by Simpson and Chung⁴ in their review on socioeconomic considerations in AD patients. They review the impact of AD morbidity on the socioeconomic status of the patient and family as well as how having AD may adversely affect socioeconomic status. This is a critical component of our future decision making for these patients as more therapeutic options (none will be inexpensive) appear. Given the somewhat more challenging way of assessing cost effectiveness in AD because hospitalization and even urgent care visits are relatively uncommon, we will have to be even more diligent in developing guidelines that can help us make therapeutic choices that meet our patients' need in as cost-effective a manner as possible.

The final and perhaps most prototypical disease for which socioeconomic considerations are critically important is food allergy. An outstanding systematic review by Bilaver and colleague⁵ addresses the current and future economic burden of food allergy. As we know, food allergy has grown from just a few kids with egg, soy, and peanut sensitivity to an increasingly common clinical problem. Multiple options are related to diagnosis, such as blinded food

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challenges and component testing, that are becoming (or already are) gold standards for diagnosis. In many instances, food allergy is associated with potentially life-threatening reactions after exposure. Even in those patients whose reactions have not previously been specifically life threatening, the potential to escalate is still present, making the common practice of prescribing injectable epinephrine a standard to which most of us adhere. This has a substantial cost in addition to social costs related to work/school impact, costs to family disruption, and lost economic opportunities.

I hope the articles described will offer you current information and provoke you to thoughtfully consider evidence about the socioeconomic impact of these and other diseases for which we care. As reimbursement models continue to evolve, it will be increasingly critical that we as allergists-immunologists be at the forefront of decision making when we determine the balance of using newer, more expensive diagnostic and therapeutic options with the

adverse impact (and its associated cost) of the disease morbidity of these inflammatory conditions.

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